Class Information

Integration and Infinite Series

Math 31B, Lecture 6
Fall Quarter 2008
MWF 2 pm–2:50 pm, MS 4000A

Instructor: Matthias Aschenbrenner

E-mail: `matthias@math.ucla.edu`

(I will not answer questions by E-mail. *E-mail should only be used to make an appointment.*)

Course webpage: `http://www.math.ucla.edu/∼matthias/31b.6.08f`

Office: MS 5614

Office phone: 310-206-8576

Office hours: M 10:30 am–12 pm, F 9:30 am–11 am, or by appointment.

(I will *not* hold 'virtual' office hours.)

Discussion sections:

Section ID	Section	Classroom	Time	TA Name
262186251	6a	PAB 1749	T 2:00P–2:50P	Sherman, Jane
262186252	6b	MS 6229	R 2:00P–2:50P	Sherman, Jane
262186253	6c	MS 5147	T 2:00P–2:50P	Hofmann, Michael
262186254	6d	MS 5138	R 2:00P–2:50P	Hofmann, Michael
262186255	6e	MS 5233	T 2:00P–2:50P	Lê Thái Hoàng
262186256	6f	MS 5147	R 2:00P–2:50P	Lê Thái Hoàng

TA e-mail addresses:

Jane Sherman: `jane27@math.ucla.edu`

Michael Hofmann: `mhofmann@math.ucla.edu`

Lê Thái Hoàng: `leth@math.ucla.edu`

Information about TA office hours are announced in the first discussion sections.

Course text: *Single Variable Calculus,* by Jon Rogawski, W. H. Freeman and Company, New York.

Prerequisites: Course 31A with a grade of C- or better.

Class meetings: This course meets for lecture three days a week and for discussion section one day a week (four times total). I will conduct lectures on Monday, Wednesday, and Friday. Please feel free to ask questions in lecture, though preferably none regarding homework problems. *Please turn off all cell phones, pagers, and other electronic devices before the lecture.*

On Tuesdays or Thursdays your TA will lead a discussion section where he or she can answer any questions, and homework problems can be discussed. The TAs will also help with those problems during their office hours.

Questions concerning homework problems and the course material should first be addressed to the TAs, and then to me, if further clarification seems necessary. Questions concerning grading should be primarily addressed to me, and not the TAs.

Homework: There will be a problem set assigned in lecture on Friday every week, and collected during lecture the following Friday. Homework is due no later than 1:05 pm in lecture on each Friday.

No late homework will be accepted.

However, your lowest homework score will be dropped when computing your grade. Homework will be returned the following week in discussion section. The problems will range in difficulty from routine to more challenging. You may work together on the exercises, but any graded assignment should represent your own work.

Put the following information in the upper right hand corner of the first page:

> *Your Name (first and last)*
>
> Date, homework assignment number
>
> TAs name, time and number of discussion section (6a–6f)

On each additional page, put your name in the upper right-hand corner. Work single-sided, i.e., write on only one side of each sheet of paper. STAPLE homework that is more than one page long. Remove all perforation before submitting. Write legibly. Label the chapter + section number as well as the problem number (e.g., 7.2 #2).

Homework that fails to meet the above requirements will be marked "Unacceptable" and returned unread.

Exams: There will be two midterm examinations, on *Wednesday, October 12* and *Wednesday, November 22,* each at 5:00 pm–6:50 pm, location to be announced. There will be a final exam on *Saturday, December 6,* 8:00 am–11:00 am, location to be announced.

No make up exams will be given under any circumstances.

For each exam, you must bring a picture ID. No books, calculators, scratch paper or notes will be allowed during exams.

Disputing midterm grades: We put a lot of effort into grading your exams. If you feel that a mistake was made in grading your midterm exam, you may request a re-grade. After each midterm is returned, a strict deadline will be posted on the web page until which a re-grade can be requested. *Be aware that a re-grade means that your exam will be graded from scratch, and it is entirely possible that you will receive a lower score than originally given, if I decide that the original grade was too high.* Also, before exams are returned in discussion, a random selection will be copied and stored. Therefore, when submitting your exam for a re-grade, make sure you document any additional material that was added to the exam after it was returned to you, and that deviates from what was originally there.

Final exams are kept for one quarter, stored for a second quarter to be picked up, and recycled soon thereafter.

Grading policy: Your final grade will be based on the following:

- 10% for homework,
- 25% for each midterm,
- 40% for final.

Scores and final grades will be available on the MyUCLA gradebook.

Letter grades: Assigned according to the departmental guidelines for Math 31B. Letter grades will only be assigned for your final grade in this course.

Academic dishonesty: Students are expected to be thoroughly familiar with the UCLA policy on academic integrity. UCLA has instituted serious penalties for academic dishonesty. *Copying work to be submitted for grade, or allowing your work to be submitted for grade to be copied, is considered academic dishonesty.* Here, 'copying' does not only refer to producing verbatim copies, but includes slightly adapting and submitting material originally due to someone else.

Additional assistance: Besides the office hours (by the instructor and the TAs), additional help is available Monday-Thursday, 9:00 am–3:00 pm in the Student Math Center located in MS 3974, where undergraduate math majors as well as math graduate students will be able to help you. Other tutoring resources inclue:

- College Math/Sciences Tutorials — 230 Covel Commons
- Academic Advancement Program (AAP) — 1201A Campbell Hall
- Engineering and Mathematical Sciences Library (EMS) — 8270 Boelter Hall
- Private Tutoring — list available in MS 6356 (fee based tutoring)

Syllabus: You are responsible for reading the textbook. I highly recommend studying the relevant section(s) before each lecture so that you are in a good position to ask questions about anything that was unclear. See the next page for a detailed description of what we'll cover when.

Week	Monday	Wednesday	Friday
1			09/26 Derivative of exponential functions (7.1)
2	09/29 Inverse functions (7.2)	10/01 Logarithms and their derivatives (7.3)	10/03 Exponential growth and decay (7.4)
3	10/06 Compound interest (7.5, 7.6)	10/08 L'Hôpital's Rule (7.7)	10/10 Numerical integration (8.1)
4	10/13 Error bounds for numerical integration (8.1)	10/15 Integration by parts (8.2)	10/17 Trig integrals and substitution (8.3, 8.4)
5	10/20 Method of partial fractions (8.5)	10/22 Review **Midterm 1**	10/24 Improper integrals (8.6)
6	10/27 Arc length (9.1)	10/29 Fluid pressure and force (9.2)	10/31 Taylor polynomials (9.4)
7	11/03 Taylor's theorem, error bound B (9.4)	11/05 Sequences (11.1)	11/07 Infinite series (11.2)
8	11/10 Infinite series, cont'd (11.2)	11/12 Review **Midterm 2**	11/14 Convergence of series with positive terms (11.3)
9	11/17 Conditional convergence (11.4)	11/19 Conditional convergence, cont'd (11.4)	11/21 Ratio and root tests (11.5)
10	11/24 Power series (11.6)	11/26 Power series, cont'd (11.6)	11/28 Thanksgiving Holiday
11	12/01 Taylor series (11.7)	12/03 Taylor series, cont'd (11.7)	12/05 Review